Drinking Water & Conservation Governance in Rural Costa Rica: Community Organization and National Policy Perspectives

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Background

- The Costa Rican government has mandated **community-based drinking water organizations (CBDWO)** as responsible for providing drinking water and wastewater management in rural communities[1].
- The **National Institute for Water and Sewage (IWS) is the governing body** of the CBDWO and regional representatives are charged with supporting CBDWO construction and management activities.
- There are over 2,000 CBDWO in the country; approximately 150 of these in each of the two study regions.
- **Urban-Rural disparity**: Consistent access to potable drinking water is available to 98% of Costa Ricans in urban households, but only 70% of rural households[2].
- Only **5% of the country's wastewater is treated**, and wastewater is disposed of directly into river systems in most rural communities, posing **threats to the health of humans and river systems**[3].

Exploratory Research Objective

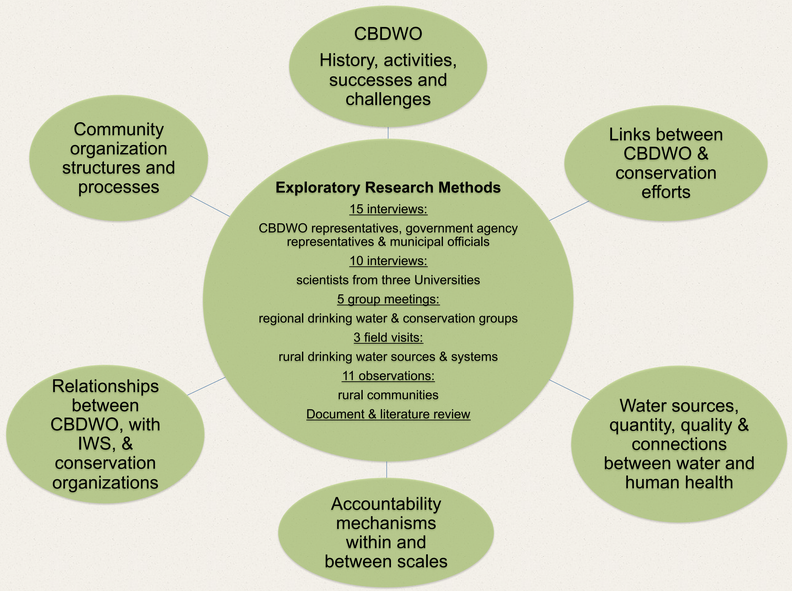
To explore the context around the governance of drinking water and conservation efforts in rural Costa Rica from both community organization and national policy perspectives.

Methods

Field research was conducted in two regions of Costa Rica:
Turrialba and Jiménez cantons in Cartago province, and
Sarapiquí canton in Heredia province.

Data was collected through semi-structured interviews, meetings, field visits, community observations and review of documents and literature. Methods and main topics covered are shown in **Figure 1**.

Figure 1. Exploratory research methods and main interview topics



What we have learned so far...

- The law establishing IWS as the governing body of CBDWO is in operation. However, **roles, responsibilities and accountability mechanisms are poorly understood** by actors at national, regional and local scales. **Multiple perspectives exist**:
  - *"People are suspicious of IWS and don't trust them. I think it's the institution's own fault for not informing people about the laws and that they have to follow them."*
  - *"IWS does what they want. They don't give us resources, even though it's their responsibility to provide us with money to do the projects that we need."*
  - *"We are not interested in forming a CBDWO under the law. We don't' want the IWS to come control us. We've worked well as a community for many years and don't need the government to intervene."*
- **Regional representatives of IWS** are assigned the role of supporting CBDWO construction and management activities, but as **one representative oversees 150-200 CBDWO** their **ability to fulfill this role is compromised**.

- **Rural communities are responsible for forming CBDWO**, but **disparities exist** in how effective CBDWO are in proving consistent access to potable drinking water.
- Both **high and low functioning CBDWO** exist within the same regions.
- Previous research has shown that **CBDWO that form their own rules and enforcement mechanisms are more successful**, and that the government does not necessarily provide the incentives for high quality water in rural communities[4].
- **Community organization mechanisms** have been **well-established historically**, but there are many **concerns** about **lack of prioritization** among community organizations, and the **continued participation of new generations**.

National Institute for Water & Sewage (IWS) ⇄ **Community-Based Drinking Water Organizations (CBDWO)** ⇄ **Rural community organization**

- The legal creation of the CBDWO is an effort of **decentralization that transfers responsibility, but not budgets, to local communities**. Nationally there **are over 500 project requests from CBDWO waiting for government funding.**
- Although the law specifies the role of the IWS in holding CBDWO accountable for some aspects of their management, there **is no existing mechanism by which CBDWO can hold the government accountable** for fulfilling their roles and responsibilities.
- The **law states that IWS & CBDWO are responsible for rural wastewater management**, but the **majority of wastewater is being dumped directly into river systems**. There are concerns about the lack of attention given to this issue.
- **Links between CBDWO and conservation efforts are informal** and varied. **Enforcement of environmental offenses is limited** to citizens filing formal complaints and limited municipal resources leave these unseen for years.

- There are **multiple perceptions of water quality and the implications of poor water quality**.
  - *"People think that if water comes through a pipe into their homes that it is potable, but it's not so. Water has to be chlorinated to be potable. Our water used to have a lot of bacteria, but we just started chlorinating."*
  - *"I think 75% of people aren't interested in knowing where their water comes from, if it's chlorinated or not, as long as they don't get charged too much"*
  - *"People use artesian wells and there are very close to their sewage pits. When it rains a lot they get mixed and drinking water is contaminated, but they drink it anyway. Some boil it, but many people don't care. There aren't health problems, but they do have intestinal parasites. They're used to living like this."*
- **"Potable"** is formally defined based solely on the presence or absence of **bacterial coliforms**. **Other potential contaminants**, such as **agrochemicals** used in key water recharge zones and by the pineapple industry, are **not measured routinely**.

Research Objective

To **explore existing and ideal governance models** for provision and conservation of drinking water **from multiple perspectives** in rural Costa Rica

Research Questions

1. What **structures and processes currently exist** for the governance of drinking water in rural Costa Rica? What actors and networks participate and why?
2. What **views about current and ideal governance models** do actors **at national, regional and local scales** hold? Are multiple views compatible?
3. What is the **quality of drinking water in the study regions?** How do **measured and perceived** water quality compare?
4. What factors explain **why local communities in decentralized contexts respond differently** to their assigned responsibility to provide drinking water?[5]
5. What **opportunities** exist **to improve water quality** in the study communities? What main **challenges** do CBDWO face? What **strategies** can be used to overcome these? What opportunities exist to **link CBDWO and efforts for conservation** of forests, trees, river systems and hydrological resources?

Potential methods

Interviews, focus groups, survey, Q-methodology, water quality testing, participatory workshops

References

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